

## **REMARKS**

### **Amendment to the Specification**

The amendment to the specification has been resubmitted, and is believed to be proper under 37 C.F.R. 1.121.

### **Claim Objections**

The examiner objected to claims 110 and 112 under 37 C.F.R. 1.75(c), as failing to further limit the subject matter of a previous claim. Claims 110 and 112 have been amended as suggested by the examiner.

### **35 U.S.C. § 112(6)**

It is applicant's intent for claim 194 to invoke 35 U.S.C. § 112(6). The following is an attempt to define where each means is defined in the specification:

#### **-means for emulsifying free hydrocarbons in drill cuttings**

Specification, p. 5, l. 1-p. 8, l. 13.

#### **-means for initiating acid reactive polymerization of a polymerizable encapsulating material.**

Specification, p. 8, l. 4 - p. 9, l. 18.

### **Claim Rejections - 35 U.S.C. §112**

The examiner rejected claims 1-15, 25-34, 43-46, 49-50, and 80-195 under 35 U.S.C. § 112 as indefinite on a number of grounds:

(1) The examiner states that the scope of the "media sufficiently acidic to initiate acid reactive polymerization of a polymerizable encapsulating material" is unclear because it is unclear what is polymerized. Independent claims 1, 15, 30, 43, 80, 100, 113, 141, 153, 162, and 174 have been amended to specify that the media is "sufficiently acidic to initiate acid reactive polymerization of a polymerizable silicate solution." Claims 1, 30, and 80 are further amended to require that the polymerization "thereby encapsulat[e] said free hydrocarbon droplets." Applicant respectfully requests withdrawal of the rejection.

(2) The examiner states that the scope of the claims is indefinite because the claims employ open language when defining subgenus or species in an alternative grouping. The claims have been amended in a manner believed to overcome the rejection.

(3) The examiner rejected claims 86-88, 104, 108, and 180-182 as employing improper Markush language. Claims 86-88, 104, 108, and 180-182, have been amended in a manner which is believed to overcome the rejection.

(4) The examiner states that, in claims 89-94, 116-117, 131, 138-140, 150-152, 171-173, and 184-188, the "ratio" (e.g. wt/vol, weight, volume, or molar) is undefined. The claims have been amended to specify that the ratio is "wt%." Persons of ordinary skill in the art would understand from the specification that the claims originally referred to "wt%." The amendments, therefore, do not narrow the scope of the claims.

(5) The examiner states that in claims 31 and 44 it is unclear what applicant intends by defining "said polyoxyethylene alcohols" twice. Claims 31 and 44 previously were amended to correct this clerical error and are believed to be in condition for allowance.

Applicant respectfully requests withdrawal of all of the foregoing rejections.

### **Rejections Under 35 U.S.C. §102**

#### **-Rejection of claims 1-14, 25-29, and 80-99 over Otrhalek et al**

The examiner rejected claims 1-14, 25-29, and 80-99 as anticipated by Otrhalek et al. (U.S. Pat. No. 4,032,466). The examiner contends that the composition described in Otrhalek is the same and that the properties must be the same. With respect to the phrase "consisting essentially of," the examiner contends that Applicant did not define the encapsulant or polymerization reaction.

#### **-Response**

Claims 26-28 have been canceled. Claim 15 has been rewritten in independent form and, based on the rejections, is believed to be allowable without further argument.

Claims 1 and 80 have been amended in response to the rejection under 35 U.S.C. §112, second paragraph, to clarify that the claimed media is adapted to initiate acid reactive polymerization of a polymerizable silicate solution thereby encapsulating free hydrocarbon droplets. The amendment is believed to overcome the rejection without further argument.

Otrhalek describes a “a thickened acid cleaner concentrate composition” (abstract; col. 2, ll. 34-62) which “is effectively used to remove siliceous and/or oily soils from metal vehicles” (Otrhalek, col. 2, ll. 64-65). In contrast, the pending claims are directed to a compositions for emulsifying “free hydrocarbons” in drill cuttings. The term “free hydrocarbons” is defined in the specification as “hydrocarbons derived either from the drilling mud, from the formation, or both.” Specification, p. 2, ll. 4-6. The examiner has not pointed to any teaching or suggestion that Otrhalek’s composition has “an HLB effective to produce an emulsion comprising free hydrocarbon droplets.”

The examiner also has not established that a media containing Otrhalek’s flocculant would be adapted to “initiate acid reactive polymerization of a polymerizable silicate solution,” or --even if Otrhalek’s media could initiate such polymerization--that the result would be encapsulating “free hydrocarbon droplets.”

With respect to claim 80-99, the phrase “consisting essentially of” is construed as limiting “the scope of a claim to the specified ingredients and those that do not materially affect the basic and novel characteristic(s) of a composition.” *In re Herz*, 190 USPQ 461, 463 (CCPA 1976). Otrhalek’s “acid cleaner composition” includes “**a flocculating agent.**” See Col. 2, ll. 35 and 50. The examiner has not established that the presence of a flocculating agent would not materially affect the basic and novel characteristics of the claimed composition. Specifically, the examiner has not established that the presence of a flocculating agent would not interfere with formation of the claimed emulsion and/or the eventual polymerization reaction.

Applicant respectfully requests that the rejection of claims 1-14, 25-29, and 80-99 be withdrawn.

**-Rejection of claims 1-9, 25-36, 80-88, and 95-99 over Lambremont et al.**

The examiner rejected claims 1-9, 25-36, 80-88 and 95-99 as anticipated over Lambremont et al. (U.S. Pat. No. 5,707,952). The examiner points particularly to col. 2, lines 38 et seq; example 1, table bridging columns 9 and 10; and claim 1.

**-Response**

Claims 26-28 have been canceled.

The examiner has not established a case of *prima facie* anticipation over Lambremont because the examiner has not pointed to a teaching or suggestion of each and every limitation of the rejected claims in Lambremont.

Lambremont describes a “a thickened cleaner for hard surfaces, such as bathtubs, sinks, tiles, porcelain and enamelware, which removes soap scum, lime scale and grease from such surfaces.” Lambremont, col. 1, ll. 5-7. Where Lambremont describes an emulsion, the dispersed phase of that emulsion comprises original components of Lambremont’s thickened cleaner. The examiner has not pointed to a teaching or suggestion in Lambremont of a composition “having an HLB effective to produce an emulsion comprising free hydrocarbon droplets,” defined as “hydrocarbons derived either from the drilling mud, from the formation, or both.” Specification, p. 2, ll. 4-6.

Lambremont’s cleaner is said to remove “soap scum, lime scale and grease” from certain enamel surfaces without harming them. Lambremont, col. 1, ll. 5-7. So, the “soap scum, lime scale, and grease” may eventually become a part of Lambremont’s used cleaner. However, the examiner has not pointed to a teaching or suggestion that, once used, Lambremont’s cleaner composition would even remain an emulsion. The examiner therefore has not pointed to a teaching or suggestion of a final cleaner solution that even would comprise droplets, or that those droplets even would comprise “soap scum, lime scale” and/or “grease.” The examiner certainly has not pointed to a teaching or suggestion that Lambremont’s cleaner would be effective to produce an emulsion comprising “‘free hydrocarbon’ droplets.”

Lambremont also is directed to “a **thickened** acidic aqueous cleaner for bathtubs and other hard surfaced items.” Col. 2, ll. 19-21 (emphasis added). Lambremont’s “thickened acidic aqueous cleaner” is said to comprise “(d) 0.3 to 2.5 percent of a hydrophobically modified polyurethane thickener.” Col. 2, ll. 47-48. Lambremont’s thickener is described as follows:

The thickener which is used in the thickened acidic composition is a hydrophobically-modified polyurethane nonionic polyol polymer thickener which has a molecular weight of about 1,000 to 1,000,000 such as Acusol 880 sold by the Rohm & Haas Co. Acusol 880 is a viscous liquid containing about 34 to about 36 wt. % of polyurethane/polyol resin, about 38 to about 40 wt. % of propylene glycol and the balance being water. The thickener is used in a concentration of about 0.3 to about 2.5 weight percent, more preferably 0.4 to 2.0 weight percent. When the thickener is used at these concentration levels, the composition is sprayable and will nicely cling to a vertical wall. Additionally, the compositions having the thickener incorporates therein are almost newtonian which means that the composition sticks well to the surface to be cleaned

allowing the acid to fully play its function. If other thickeners such as cellulose, hydroxypropyl cellulose, polyacrylate polyacrylamides and polyvinyl alcohol are used in the composition in place of the polyurethane/polyol thickener, the resulting composition will be either physically unstable or will not be sprayable.

Lambremont, col. 7, ll. 1-23. *See also* claim 1. Compositions D, E, F, and G in the Table of Example 1 each contain "Acusol 880," described above. The remaining compositions contain the following, which apparently were used for comparative purposes: A-xanthan gum; B-cellulose; H-polyacrylates; and, C-laponite clay.

The examiner has not pointed to a teaching or suggestion that Lambremont's media comprising a "thickener" is adapted to initiate acid reactive polymerization of a polymerizable silicate solution. Even if the examiner had made such a showing, the examiner has not established that Lambremont's media comprising a "thickener" would be adapted to encapsulate any dispersed phase, much less free hydrocarbon droplets.

With respect to claim 80-88 and 95-99, which include the transitional phrase "consisting essentially of," the examiner has not established that the presence of Lambremont's thickener would not materially affect the basic and novel characteristics of the claimed composition. The examiner has not established that a media containing Lambremont's "thickener" would be adapted to "initiate acid reactive polymerization of a polymerizable silicate solution," or that--even if Lambremont's media could initiate such polymerization--that the result would be encapsulation of anything, much less "encapsulating said free hydrocarbon droplets."

Applicant respectfully requests that this rejection be withdrawn.

**-Rejection of claims 1-6 and 25-29 over Thomas et al.**

The examiner also rejected claims 1-6 and 25-29 as anticipated by Thomas et al. (U.S. Pat. No. 5,192,460).

**Response**

Thomas' describes a "cleaner for hard surfaces, such as bathtubs, sinks, tiles, porcelain and enamelware." Col. 1, ll. 7-9. Thomas's cleaner is "an acidic aqueous cleaner, preferably in emulsion or microemulsion form." Thomas, abstract. The emulsions or microemulsions described in Thomas are emulsions in which the dispersed phase comprises original components of Thomas' cleaner.

In contrast, as pointed out above, claim 1 is directed to a composition for emulsifying “free hydrocarbons,” which are defined as “hydrocarbons derived either from the drilling mud, from the formation, or both.” Specification, p. 2, ll. 4-6. The examiner has not pointed to a teaching or suggestion that Thomas’ cleaner has “an HLB effective to produce an emulsion comprising ‘free hydrocarbon’ droplets,” as required by currently pending claim 1. The only mention of HLB that Applicant has found in Thomas is the following:

In some of the condensation products of ethylene oxide and higher fatty alcohol or alkyl substituted phenol (in which the alkyl on the phenol nucleus is usually of 7 to 12 carbon atoms, preferably 9), some propylene oxide may be blended with the ethylene oxide so that the lower alkylene oxide moiety in the nonionic detergent is mixed, whereby the hydrophilic-lipophilic balance (HLB) may be controlled.

The foregoing is not a teaching to control the HLB so that it is “effective to produce an emulsion comprising ‘free hydrocarbon’ droplets.” In fact, the foregoing teaching regarding HLB should be considered a teaching to control the HLB so that Thomas’ cleaner is effective to “remove[] soap scum, lime scale and grease from such surfaces without harming them.” Col. 1, ll. 9-10; see also claim 1.

“Soap scum, lime scale, and grease” may eventually become a part of Thomas’ used cleaner. However, the examiner has not pointed to a teaching or suggestion that, once used, Thomas’ cleaner composition would even remain an emulsion. See for example the explanation in the context of cosurfactants that:

The cosurfactant component(s) of the microemulsion cleaners reduce the interfacial tension or surface tension between the lipophilic droplets and the continuous aqueous medium to a value that is often close to  $10^{-3}$  dynes/cm., which results in spontaneous disintegrations of the dispersed phase globules until they become so small as to be invisible to the human eye, forming a clear microemulsion. In such a microemulsion the surface area of the dispersed phase increases greatly and its solvent power and grease removing capability are also increased, so that the microemulsion is significantly more effective as a cleaner for removing greasy soils than when the dispersed phase globules are of ordinary emulsion sizes.

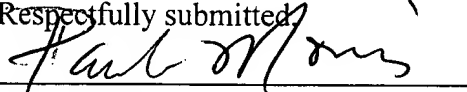
Thomas, col. 7, ll. 8-21. In any event, the examiner has not pointed to a composition that would produce an emulsion “comprising free hydrocarbon droplets” as required by claim 1.

Applicant respectfully requests that the rejection be withdrawn.

## **CONCLUSION**

For all of the foregoing reasons, Applicant respectfully requests reconsideration and allowance of all of the pending claims. The Commissioner is hereby authorized to charge any fees in connection with this response, or to credit any overpayment, to Deposit Account No. 02-0429 maintained by Baker Hughes Incorporated.

Respectfully submitted,



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